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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Shih-Zheng Kuo

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Stolowitz Ford Cowger LLP

621 SW Morrison St

Suite 600

Portland, OR 97205

EXAMINER

KAU, STEVEN Y

ART UNIT

PAPER NUMBER

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Advisory Action Before the Filing of an Appeal Brief	Application No. 10/662,258	Applicant(s) KUO, SHIH-ZHENG	
	Examiner STEVEN KAU	Art Unit 2625	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 20 January 2009 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☐ The period for reply expires _____ months from the mailing date of the final rejection.
- b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
- (a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);
- (b) ☐ They raise the issue of new matter (see NOTE below);
- (c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
- (d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): _____.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
- The status of the claim(s) is (or will be) as follows:
- Claim(s) allowed: _____.
- Claim(s) objected to: _____.
- Claim(s) rejected: 1-24.
- Claim(s) withdrawn from consideration: _____.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:
See Continuation Sheet.
12. ☐ Note the attached Information *Disclosure Statement(s)*. (PTO/SB/08) Paper No(s). _____
13. ☐ Other: _____.

/David K Moore/
 Supervisory Patent Examiner, Art Unit 2625

/Steven Kau/
 Examiner, Art Unit 2625

Continuation of 11. does NOT place the application in condition for allowance because: Regarding Claim 1, applicant argues that cited references (Lee' 015, Selby' 232 and Irie' 409) do not teach the following limitations, recite, "... scanning a continuous longitudinal black pattern while scanning the document to determine a correctional gray level value for complete black; scanning a continuous longitudinal white pattern while scanning the document to determine a correctional gray level value for complete white...", page 8, Remarks, received on 01/20/2009. In particular, applicant argues that "the Examiner alleges that Selby teaches scanning a continuous longitudinal black pattern while scanning a document and scanning a continuous longitudinal white pattern while scanning the document. The rejection is respectfully traversed. Referring to FIG. 4 of Selby, a white test strip 30 and a black test strip 32 are located above a sheet S. The path of a shuttle 14 that carries a lamp 12 is shown by an arrow at the bottom of FIG. 4. FIG. 5 of Selby shows in more detail the interrelationship between the photo- sensor in array 20 and the test strips 30 and 32 (col. 4, lines 15-17) and confirms that the black and white test strips 30 and 32 are both positioned at the top of platen 10 above the sheet S. Since the white test strip 30 and the black test strip 32 are located above the document S at the top of a scanning path, neither the white test strip 30 nor the black test strip 32 can be scanned while scanning document S, much less both as recited in claim 1", pages 8-9, Remarks, dated received, 1/20/2009.

In re, the examiner respectively disagrees the above assertion. As discussed in the previous office action, the limitations of "scanning a continuous longitudinal black pattern while scanning the document to determine a correctional gray level value for complete black; scanning a continuous longitudinal white pattern while scanning the document to determine a correctional gray level value for complete white" are taught by Lee' 015 in view of Selby' 232 and further in view of Irie' 409. For example, Lee' 015 discloses an apparatus and method for increasing the scan accuracy and quality of the flatbed scanner such that an image sensor reads the image information of the optical ruler along with a scanned sheet (Abstract, Figs 1-3 and col 2, line 37 to col 3, line 7). Selby' 232 discloses a scanner calibration system, which adjusts gray scale values of scanned image with various arithmetic functions for correction or compensation (col 1, lines 19-50 and col 4, line 37 to col 5, line 19). The reason for scanner gray scale value compensation is that "in the day-to-day use of a scanner, the responsivity of the photosensors changes over time and the changes in the system must be compensated periodically" (col 1, lines 31-35). Selby' 232 discloses an embodiment that the full width sensor array 20 moving along with the lamp 12 to receive the reflected light from the image on the sheet and reflected light from the black and white test strips as shown in Figs 4 and 5 (col 3, line 34 to col 4, line 36) as discussed in the office action dated 11/11/2008. Applicant's argument, recites, "Since the white test strip 30 and the black test strip 32 are located above the document S at the top of a scanning path, neither the white test strip 30 nor the black test strip 32 can be scanned while scanning document S, much less both as recited in claim 1" is incorrect. Fig. 4 indicates that both the black and white strips are adjacent to the platen 10 of the figure, but are not on top of the sheet S. The reason to have these test strips built into the scanner is to prevent any dirt on the test strips for accurate gray scale value reading (col 1, line 51 to col 2, line 12). The lamp 12 and array sensor 20 are arranged in the other side or below the platen 10 and strips 30 and 32. Therefore, the array sensor can receive reflected light from both scanned image from sheet S and test strips 30 and 32 and passes the signal to the image processing system 22 (col 3, line 34 to col 4, line 36). Thus, the scanner can be calibrated periodically (col 4, lines 3-14). Having a method of Lee' 105 and then given the well-established teaching of Selby' 323, one skilled in the art would have motivated to modify Lee' 105 to include scanning a continuous longitudinal black pattern while scanning the document to determine a correctional gray level value for complete black; scanning a continuous longitudinal white pattern while scanning the document to determine a correctional gray level value for complete white, and the motivation is to improve the scanner calibration accuracy by compensating the system offset and adjusting the system gain.

Regarding claim 2, applicant argues that "The Examiner alleges that this is taught in Lee. This rejection is also respectfully traversed. Lee in FIG. 1 shows an optical ruler 103 that includes alternating black blocks 105 and white blocks 106. A scanned document faces a transparent window 103 and is scanned in a scan direction 104 (col. 2, lines 37-44) along the alternating black and white blocks of optical ruler 103 (FIG. 1). Since the black and white blocks 105 and 106 alternate along the scanning path direction 104 (FIG. 1), neither the black blocks 105 nor the white blocks 106 can extend continuously along substantially an entire length of the scanning path as recited in claim 2. Thus, Lee actually teaches away from the elements recited in claim 2", pages 10-11, Remarks.

In re, the examiner respectfully disagrees. claim 2 is a dependent claim to claim 1 and claims 1, 2, 4, 5, 7 and 8 are obvious to Lee' 015 in view of Selby' 232 and further in view of Irie' 409. Indeed, the limitations of "wherein the longitudinal black pattern is positioned along a lateral side of the scanning platform and extends continuously along substantially an entire length of the scanning path and wherein the longitudinal white pattern is positioned laterally adjacent to the longitudinal black pattern and extends continuously along substantially the entire length of the scanning path" have been taught and addressed in the claim 1 rejection discussion.

Regarding claim 10, applicant argues, "FIG. 1 of Seachman shows a calibration strip 3 positioned in parallel with the lamp 1 and the sensor 7. The direction of scanner movement in Seachman therefore moves perpendicular to the longitudinal direction of tag 5 and calibration strip 3 (Col. 2, lines 52-57; col. 4, lines 49-59). Because, the lengthwise direction of the calibration strip 3 in Seachman is orthogonal to the direction of scanner movement, Seachman teaches away from a reference pattern elongated in a document scanning direction as recited in claim 10", page 10, Remarks.

In re, the examiner disagrees with the above arguments because the assumption of "the direction of scanner movement in Seachman moves perpendicular to the longitudinal direction of tag 5 and calibration strip 3" is incorrect. The difference between Figure 1 and 2 is the location of the machine readable tag 5, but the direction of scanner movement is the same, which is along the test strip in longitudinal direction so that the light emitted to the strips and the tag from the lamp and the light reflected from the strips and the tag to the sensor in a continuously process (col 4, lines 4-16) rather than on and off process as suggested by the applicant.

pixels of a scanned image of the document; determine a compensational gray level value for the pixels of the scanned image based at least in part on the reference pattern; and compensate the scanned image using the compensational gray level value, as recited in claim 10. Horiuchi explains at col. 12, line 50 that a device separately extracts components of scanning speed fluctuations by reading variations of the optical density of respective reference scale lines and analyzes the speed fluctuations state of the scanning means when scanning an image in the feed direction to eliminate the possibility of image blur due to an unstable driving mechanism. Horiuchi at col. 13, line 45 states that corrected data is used only for determining the conditions of the speed fluctuation analysis. In other words, Horiuchi scans a black and white chart 17 (FIG. 8) only for adjusting the speed of a scanning device. Any analysis in Horiuchi is performed on the data obtained from a chart image 17 (FIG. 8, col. 9, lines 3-6), not on grey level values of a scanned document as recited in claim 10. Horiuchi never compensates the grey level values of a document, much less compensate the document grey level values of the document based at least in part on a reference pattern as recited in claim 10", page 10-11, Remarks.

In re, the examiner respectfully disagrees with the above assertion that "Horiuchi never compensates the grey level values of a document, much less compensate the document grey level values of the document based at least in part on a reference pattern as recited in claim 10". As discussed in the office action, Horiuchi' 469 discloses that "The object of the present invention is to provide a document-image reading device that can separate and extract a speed fluctuation component by determining a gray-level change of each scale line (not reading time-interval), analyze a state of speed fluctuation of scanning in the feed direction and, based on the analysis result, eliminate the possibility of image deformation that may be caused from the unstable factors of the driving mechanism of the device" (col 3, lines 18-26) and "A document-image reading device according to another aspect of the present invention can examine white (or black) levels of a whole image of an equal-pitch scale and compensate the whole image by using the same correction factor so that all the white (or black) portions may show a constant value", (col 13, lines 16-26). Thus, the gray level determination and compensation is the backbone of scanning speed fluctuation analysis and correction. Without gray level determination and compensation, the method of Horiuchi' 469 for analyzing scanning speed fluctuation state of a scanner will not work. Thus, having the apparatus of Sheng' 982 and well established teaching of Horiuchi' 469, one skilled in the art would have motivated to modify Sheng' 982 to include determining actual gray level values for each pixel of a scanned image of the document and compensating the scanned image using the compensational gray level value taught by Horiuchi' 469, since doing so would have enhanced image quality by compensating the possible distortion of a reproduction imaged due to scanning speed fluctuation with a predictable result.

Conclusion: for the foregoing reasons as well as the rational discussed in the office action, claims 1-24 are not yet in the condition for patentability allowance.

/S Kau/
Examiner, AU 2625
01/26/2009